

REMARKS/ARGUMENTS

An Information Disclosure Statement is filed herewith.

The amendments of claims 1, 5 and 9 clarify that the amounts are in "% by weight." This was inherent in the context of the claims and is supported by Table 1 of the specification. For example, as mentioned in the 3rd column from the left of Table 1, Content A of Phosphorescent or Fluorescent Compound in Light Emission Layer is expressed as "% by weight". In the same way, Contents B and C each are also expressed as "% by weight" as shown in Table 1.

The amendments to Claims 1, 5 and 9 also restate and clarify the meaning of content of phosphorescent compound of the original claim language in view of the Examiner's misunderstanding as detailed below. In particular, each of the hole blocking layer and the light emitting layer has a phosphorescent compound content. The amount or % by weight of the phosphorescent compound in the hole blocking layer is 0.1 to 20% of the amount in the light emitting layer.

Claims 1, 3, 24-25 and 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Motomatsu (US Patent No 6,541,909) in view of Thompson et al (US PG Pub. No. 2003/0068528). There are a large number of additional rejections of dependent claims, all of which rely primarily on Motomatsu.

With respect to claim 1, the Examiner states that Motomatsu discloses that the amount of material in the hole blocking layer (7) in relation to the amount of material in the luminescent layer (4) will be:

.6%/(3.33)(1%) to 6%/(3.33)(10%) or .18(18%) which is within the claimed range.

However, the "content" used in Claim 1 of the present application represents a content ratio (% by weight) of the phosphorescent compound contained in hole blocking layer 1 as a percentage of the content ratio (% by weight) of the phosphorescent compound contained in the light emitting layer (which is clearly described such as in Table 1).

For example, in the 3rd column from the left of Table 1 (page 92), Content A of Phosphorescent or Fluorescent Compound in Light Emission Layer is clearly expressed as "% by weight". Contents B (Hole blocking layer) in the next column in Table 1 is also expressed as "% by weight" in the same manner. The % by weight is defined in the footnotes under the Table.

Accordingly, the "content" used in Claim 1 of the present application does not express the "amount" of the phosphorescent compound contained in the light emitting layer or in the hole blocking layer, it states that the content (% by weight) amount of a phosphorescent compound in the hole blocking layer is 0.1 to 20% of the content (% by weight) a phosphorescent compound in the light emitting layer. This is in contrast to the Examiners calculation and reasoning.

Motomatsu teaches that "it is preferable that a doped amount in the luminescent layer 4 is in a range of 1 to 10% by volume, and a doped amount in the doped layer 7 is in a range of about 0.6 to 6% by volume. As one example, when the doped amount in the luminescent layer 4 was set to 5%, a doped amount in the region where the electron transport layer 5a contacts the

luminescent layer 4, or the doped layer 7 (the electron transport layer can work also as a hole blocking layer), was set to 3%" (Column 4, line 19-26 of Motomatsu).

Namely, the preferable dopant amount (% by volume) in the doped layer 7 of Motomatus is 60% of the doped amount (% by volume) in the luminescent layer 4, which is far beyond the upper limit of the claimed range of the present application, namely, 20%.

As an example for the present invention, in TABLE 1 of the present application, "the content (% by weight) of the phosphorescent compound contained in hole blocking layer 1" of Organic EL element 1-1 is 0.05% by weight, which is "a content ratio (% by weight)" (based on the total weight of the hole blocking layer) but not "an amount", while "the content (% by weight) of the phosphorescent compound contained in the light emission layer" is 6% by weight (based on the total weight of the light emission layer). Thus, "the content (% by weight) of the phosphorescent compound contained in hole blocking layer 1" is 0.8331 of "the content (% by weight) of the phosphorescent compound

contained in light emission layer", which is within the claimed range (0.1 - 200).

Accordingly, Claim 1 is not shown or suggested by the two references and their combined teaching.

Claims 5 and 9 are amended in a corresponding way as was Claim 1.

Based on the same reasoning as applied to Claim 1, the rejection of Claim 9 should also be withdrawn. Adding Kim does not change this conclusion since the combination fails to provide missing teaching. Claim 5 is rejected over a combination of Motomatsu and Kim. The reasoning above applies here. The teaching missing in Motomatsu is not found in Kim. Therefore, combining Kim does not show or suggest one claimed invention.

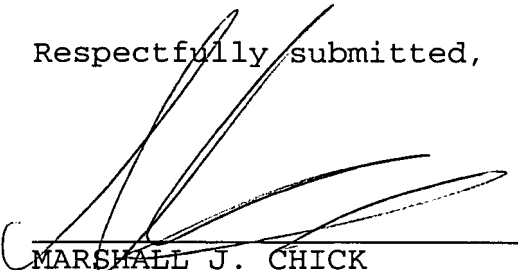
Since claims 2-4 and 23-26 are dependent to claim 1, claims 6-8 and 27-30 are dependent to claim 5, and claims 10-15 and 31-34 are dependent to claim 9, the rejections of these claims should also be withdrawn. The additional art cited with respect to these claims, when combined with the primary references does not provide missing teaching.

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Withdrawal of the rejections and allowance of the
applicants are respectfully requested.

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Encs.: Petition for Two Month Extension of Time
Form PTO-2038 - \$490
Information Disclosure Statement and References
RCE
Form PTO-2038 - \$810